

AMENDMENTS TO THE CLAIMS:

Listing of Claims

1. (Currently Amended:)

1. An apparatus for irradiating an article comprising:

- (a) a housing;
- (b) a support disposed within said housing for supporting the article;
- (c) a source of radiation disposed within said housing at a spaced apart location from said support;
- (d) shutter means disposed intermediate said support and said source of radiation for movement between a first, closed position blocking irradiation of the article and a second open position permitting irradiation of the article; and
- (e) control means for energizing said source of radiation and for controlling said shutter means said control means comprising a timer which can be set for a first interval of time between energization of said source of radiation and movement of said shutter means between said first and second positions to allow said source of radiation to reach a full energization level and can also be set for a second interval of time during which said shutter means remains in said second position.

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2. (Original)

The apparatus as defined in claim 1 in which said source of radiation comprises a source of ultraviolet radiation.

3. (Original)

3. The apparatus as defined in claim 1 in which said shutter means comprises:

(a) a supporting frame mounted within said housing proximate said planar array; and

(b) a plurality of blocking elements connected to said supporting frame for movement between a first, shutter closed position to a second, shutter open position.

4. (Original)

The apparatus as defined in claim 1 further including a timer operably associated with said control means and with said shutter means for moving said shutter means between said first and second positions at selected intervals of time.

5. (Original)

The apparatus as defined in claim 4 in which said control means comprises data input means operably associated with said timer for setting said timer.

6. (Currently Amended)

6. An apparatus for irradiating an article comprising:

(A)

- (a) a housing;
- (b) a support disposed within said housing for supporting the article;
- (c) a source of radiation disposed within said housing at a spaced apart location from said support, said source of radiation comprising a plurality of ultraviolet emitting lamps mounted within said housing;
- (d) shutter means disposed intermediate said support and said source of radiation for movement between a first, closed position blocking irradiation of the article and a second open position permitting irradiation of the article, said shutter means comprising:
 - (i) a supporting frame mounted within said housing proximate said planar array; and
 - (ii) a plurality of blocking elements connected to said supporting frame for movement between a first, shutter closed position to a second, shutter open position; and
- (e) control means operably associates with said shutter means for energizing said source of radiation and for controlling said shutter means
said control means comprising a timer which can be set for a first interval of time between energization of said source of radiation and movement of said shutter means between said first and second positions to allow said source of

allow said source of radiation to reach a full energization level and can also
be set for a second interval of time during which said shutter means remains
in said second position.

7. (Original)

The apparatus as defined in claim 6 further including a timer operably associated with said shutter means and with said control means.

8. (Currently Amended)

The apparatus as defined in claim 7 in which said shutter means further comprises shutter operating means operably associated with said timer for moving said blocking elements vanes from said first shutter open position to said second shutter closed position upon the passage of a selected interval of time.

9. (Original)

The apparatus as defined in claim 8 in which said shutter operating means comprises a solenoid.

10. (Original)

The apparatus as defined in claim 8 in which said control means comprises data input means operably associated with said timer for controlling the operation of said timer.

11. (Original)

The apparatus as defined in claim 8 in which said blocking elements comprise a plurality of vanes pivotally connected to the said supporting frame for movement between a first shutter open position and a said second shutter closed position.

12. (Original)

The apparatus as defined in claim 8 in which said blocking elements comprise a plurality of panels connected to the said supporting frame for movement between a first shutter open position and a said second shutter closed position.

13. (Currently Amended)

A method for irradiating an article using an apparatus comprising a housing, a support disposed within the housing for supporting the article, a source of radiation disposed within the housing at a spaced apart location from the support, shutter means disposed intermediate the support and the source of radiation for movement between a first, closed position blocking irradiation of the article and a second open position permitting irradiation of the article, and control means for energizing the source of radiation and for controlling the shutter means, the method comprising the steps of:

- (a) placing the article to be irradiated on the support;

(b) determining a first the time period of time required for the source of radiation to reach its full energization level and determining a second period of time that the article is to be irradiated;

(c) using the control means energizing the source of radiation;

(d) using the control means and following the expiration of said first period of time, moving the shutter means to the second open position; and

(e) at the end of said time period, moving the shutter means to the first, closed position.

14. (Cancelled)

15. (Original)

A method for irradiating an article using an apparatus comprising a housing, a support disposed within the housing for supporting the article at a spaced apart location from the support, shutter means disposed intermediate the support and the source of radiation for movement between a first, closed position blocking irradiation of the article and a second open position permitting irradiation of the article, a timer operably associated with the shutter means and a control means for energizing the source of radiation and for controlling the timer, the method comprising the steps of:

(a) placing the specimen to be irradiated on the support;

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- (b) determining the elapsed time from energizing the source of radiation to emission of maximum radiation by the source of radiation to define a shutter open time;
- (c) using the control means, energizing the source of radiation;
- (d) at the shutter open time, using the timer means to move the shutter means to the second open position;
- (e) determining the length of time during which the article is to be irradiated to define a shutter close time; and
- (f) at the shutter close time, using the timer means to move the shutter means to the first closed position.

16. (Original)

The method as defined in claim 15 in which the support is mounted on a drawer having a door and in which the method includes the further step of closing said shutter means upon opening the door.

17. (Original)

The method as defined in claim 15, including the further step of, following movement of the shutter means to the first closed position, deenergizing the source of radiation.

ADD THE FOLLOWING NEW CLAIMS

18. (New)

18. An apparatus for irradiating a polynucleotide comprising:

(a) a housing having an upper portion, a lower portion and an internal chamber disposed between said upper and lower portions;

(b) a drawer assembly connected to said housing and disposed within said internal chamber and including a support for supporting the polynucleotide, said drawer assembly being moveable between a first position wherein said support is disposed within said chamber and a second position wherein said support is at least partially outside said chamber;

(c) a source of ultraviolet radiation disposed within said upper portion of said housing at a spaced apart location from said support;

(d) shutter means disposed intermediate said support and said source of radiation for movement between a first, closed position blocking irradiation of the article and a second, open position permitting irradiation of the article; and

(e) control means for energizing said source of radiation and for controlling said shutter means said control means comprising a timer which can be set for a first interval of time between energization of said source of radiation and movement of said shutter means between said first and second

positions to allow said source of radiation to reach a full energization level and can also be set for a second interval of time during which said shutter means remains in said second position.

19. The apparatus as defined in claim 18 in which said timer means causes said shutter means to automatically close upon movement of said drawer assembly toward said second position.
